

REMARKS

In the Office Action mailed May 23, 2006, Claims 27-35 were pending for consideration, all of which were rejected on various statutory grounds. Particularly, Claims 27-35 were rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite. Claims 27, 28, 29, 31, 32, and 34 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over European Patent No. EP 0 570 635 (herein after “Slutz”) in view of U.S. Patent No. 4,239,502 (hereinafter “Slack”). Additionally, Claims 30 and 33 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Slutz in view of Slack, or further in view of U.S. Patent No. 5,116,568 (hereinafter “Sung ‘568”). Further, Claims 27, 28, and 30-33 were rejected under 35 U.S.C. §§ 102(b) or 103(a) as allegedly anticipated or in the alternative obvious in view of U.S. Patent No. 6,039,641 (hereinafter “Sung ‘641”). Additionally, Claim 34 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Sung ‘641. Finally, Claim 35 was rejected under 35 U.S.C. § 103(a) as allegedly obvious over Sung ‘641.

By the present amendment, Claims 27 and 31 have been amended. Support for this amendment can be found, *inter alia*, on page 11, lines 20-30. Applicant respectfully submits that no new matter is introduced by the present amendment. Further, it is to be noted that such amendments are made solely for the purposes of expediting prosecution of the present case, without conceding to the Examiner’s arguments, and without prejudice to Applicant’s right to pursue canceled or relinquished subject matter in a future patent application. As a result of the present amendment, Claims 27-35 remain pending for consideration, and reconsideration thereof in view of the following remarks is respectfully requested.

Objection to the Disclosure

The Examiner objected to the disclosure of the present application because the continuing data was not updated on page 1. The specification has been amended to update this information. Reconsideration is respectfully requested.

Objection to the Claims

The Examiner objected to Claim 31 because a strikethrough from the previous amendment was not distinguishable from an unamended dash specifying the claim dependency. The claim has been amended in a manner that should make the claim dependency clear. Reconsideration is respectfully requested.

Rejection Under 35 U.S.C. § 112, second paragraph

Claims 27-35 were rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite. Specifically, the Examiner has rejected Claim 27 because it is allegedly unclear how the coating of the superabrasive particles occur. The Applicant respectfully disagrees with the implication that the claims must teach the process being claimed. It is well established that the claims must be read in light of the specification, and it is to the specification that one of ordinary skill in the art would turn to ascertain various manufacturing techniques. Teachings of how the coating of the superabrasive particles can occur is specifically discussed in the specification. For example, page 12, lines 15-23 of the specification as filed teach coating techniques that include dipping, dripping, powders, etc. More specifically, page 14 line 29 to page 15 line 5 teaches a method for simultaneously coating and metallurgically bonding together a plurality of superabrasive particles.

Additionally, the Examiner has asked what is the source of the braze forming the molten braze. The Applicant asserts that Claim 27 is intended to cover braze alloys of any form, irrespective of the source of the braze. Thus the source of the braze is not necessarily a

limitation in Claim 27, as long as the molten braze is capable of coating the particles and metallurgically bonding them together upon solidification to form a tool precursor. Accordingly, Applicant requests that the rejection be withdrawn.

Rejection under 35 U.S.C. § 102(b)

Claims 27, 28 and 30-33 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Sung '641.

The Sung '641 reference:

The Sung '641 reference teaches a method of making an abrasive tool which comprises infiltrating a matrix support material having diamond grains disposed therein with a liquid braze alloy. The diamond grains may be arranged in the matrix support material in a predetermined pattern. As is stated in col. 5, lines 44-46, “[i]t is an object of the present invention to provide an improved method for forming tools having diamond particles disposed therein/thereon.”

Claim 27, on the other hand, provides a method of making a tool precursor. As such, an article made from such a method is not a tool, but merely a precursor that undergoes further processing to form an actual tool. The Sung '641 reference teaches the infiltration of a matrix support material having disposed diamond grains therein to form a finished tool. In other words, upon infiltration the tool is in a finished form. This reference does not teach or suggest, however, the manufacture of a tool precursor that is not in a finished state upon solidification of the braze alloy. Accordingly, the Sung '641 reference does not teach each and every element of Claim 27. Additionally, Claims 28 and 30-33 depend from Claim 27 and are considered to be narrower in scope, and would thus be allowable along with Claim 27. Applicant respectfully requests that these rejections be withdrawn.

Rejection Under 35 U.S.C. § 103(a)

Claims 27, 28, 29, 31, 32, and 34 were rejected as allegedly obvious over Slutz in view of Slack, Claims 30 and 33 were rejected as allegedly unpatentable over Slutz in view of Slack, or further in view of Sung '568, Claims 27, 28, and 30-33 were rejected as allegedly obvious in view of Sung '641, Claim 34 was rejected as allegedly obvious over Sung '641, and Claim 35 was rejected as allegedly obvious over Sung '641.

While Applicants are confident that the Examiner is well acquainted with the requirements necessary to establish a *prima facie* case of obviousness, it is thought prudent to briefly review the required elements. Specifically, in order to meet the burden of establishing a *prima facie* case of obvious, the Patent Office must show that: 1) each and every element of the invention as set forth in the claims is taught or suggested by the reference as modified; 2) that there is sufficient motivation contained in the reference itself or the knowledge of one of ordinary skill in the reference to modify or combine the reference; and 3) that one of ordinary skill in the art would find a sufficient likelihood of successfully making the modification or combination asserted. Applicants respectfully submit that the Examiner has failed to satisfy these requirements with any of the asserted rejections.

Slutz in view of Slack:

The Slutz reference teaches coating granules of cubic boron nitride with an active coating material and sintering the coated particles with or without a powdered metal alloy (abstract). The active coating material is applied by CVD, electrolytic, and electroless deposition (col. 4, lines 24-47). The granules are then sintered, with or without metal powder (abstract, col. 6, lines 43-54).

The Slack reference teaches coating the surface of natural diamond crystals with a liquid silver-base alloy at 1000 °C. Following coating the individual diamonds were allowed to cool. (col. 3, lines 30-44).

Amended Claim 27 requires that a plurality of superabrasive particles be coated with a molten braze alloy, and that the molten braze alloy be solidified to metallurgically bond together the plurality of superabrasive particles. In other words, the superabrasive particles are bonded together due to the cooling and solidification of the molten braze alloy. The Examiner has suggested that it would be obvious to replace the electrolytic coating of Slutz with the silver alloy coating of Slack to arrive at the limitations of Claim 27. The Applicants respectfully disagree. Even assuming the substitution of the silver alloy coating, Slutz teaches sintering the particles together. As such, this combination of references would not render obvious to one of ordinary skill in the art to metallurgically bond coated particles together via the solidification of the molten alloy. As has been discussed, Slack teaches cooling the diamond particle following coating. Accordingly, a *prima facie* of obviousness case has not been established because the combination of Slutz and Slack does not teach or suggest each and every element of amended Claim 27. As such, Applicants respectfully request that the rejection of Claim 27 be withdrawn. Additionally, it is also requested that the rejections over Slutz in view of Slack for the remaining Claims 28-35 be withdrawn, as these claims depend from Claim 27 and are considered to be narrower in scope. Additionally, as the Sung '568 reference is cited only in combination with Slack and Slutz against dependent Claims 30 and 33, it will not be discussed in detail.

The Sung '641 reference:

Claims 27, 28, and 30-33 were rejected as allegedly obvious in view of Sung ‘641, Claim 34 was rejected as allegedly obvious over Sung ‘641, and Claim 35 was rejected as allegedly obvious over Sung ‘641.

As discussed above, the Sung ‘641 reference teaches a method of making an abrasive tool in a finished form. As such, it would not have been obvious to one of ordinary skill in the art to modify the reference and thus arrive at a method of making a tool precursor. The Examiner has not provided such a suggestion or teaching from the Sung ‘641 reference as to how one of ordinary skill in the art would have been motivated to make such a modification to the reference. Additionally, it has not been shown that each and every element of Claim 27 has been taught or suggested by the reference as modified. As such, a *prima facie* case of obviousness has not been established, and the Applicant respectfully requests that the rejection of Claim 27 be withdrawn, along with the rejections of Claims 28, and 30-33 due to their dependence therefrom.

CONCLUSION

In view of the foregoing, the Applicants believe that Claims 27-35 present allowable subject matter and allowance thereof is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the present amendment and the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone the undersigned attorney so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 20-0100.

Dated this 23rd day of October, 2006.

Respectfully submitted,

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